

## ABSTRACT

Provided is a convenient process of manufacturing a two-dimensional bead array on a chip by disposing a plurality of beads immobilized with a biomolecular probe in a bead array container in a predetermined order. The bead array chip is manufactured by repeating the following operations: a container having a plurality of first channels disposed in parallel with each other and a second channel crossing therewith is retained in a container retaining portion and a capillary is moved through the second channel of the container vertically. The capillary is moved downward to suck and retain, in an end thereof, one bead stored in a storing portion of a bead storing plate and then, moved upward to the position of a desired first channel. Under this state, pure water is fed to the first passage from a water feed system and a water stream is generated by sucking the pure water by a suction pump. The bead retained in the end of the capillary is transferred by the water stream and is then, blocked by a dam disposed in the first channel, in which the bead is retained.